

**WATER CONSERVATION PLAN UPDATE
FOR
VILLAGE OF LOS LUNAS, NEW MEXICO**

**Prepared by:
Lee Wilson & Associates, Inc.
and
PCR Resources**

October, 2015

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Introduction

This water conservation plan update describes the progress made by the Village of Los Lunas in implementing the water conservation actions identified in its 2010 Forty Year Water Development Plan. It is being submitted to the New Mexico Office of the State Engineer (OSE) to meet Condition 8 of the Village's water right permit, RG-20516.

The update focuses on actions taken from 2010 to 2015 and identifies some of the data management and staffing challenges Los Lunas has encountered during recent years that have affected the extent of the Village's conservation accomplishments. It also includes a revised timetable for implementing the water conservation measures that the Village was not able to accomplish during this time period and includes new measures which the staff has identified for inclusion in its water conservation efforts.

1.0 Water Conservation Plan History

The Mid-Region Council of Governments prepared a water conservation plan for the Village of Los Lunas in 2006. The plan contained a list of recommended conservation actions, many of which were implemented between 2006 and 2008. In 2008, the Village filed a water conservation plan update, which was submitted to the OSE. (See Appendix A) The 2008 update describes the recommended actions, as well as the implementation activities completed by the Village during that period.

2.0 2010 Forty Year Water Development Plan

Los Lunas completed a Forty Year Water Development Plan in 2010, which contained a detailed water conservation action plan and related timetable for implementing a broad set of conservation measures. The plan included the following measures:

- Revision of the existing water waste and water shortage ordinances
- Correction of data collection and management problems
- Evaluation of a toilet rebate program, or similar incentive, to reduce residential water use
- Establishment of procedures to identify higher-than-normal water usage for institutional, commercial and industrial (ICI) water users
- Offering water use surveys to improve ICI water use efficiency
- Encouragement of water conservation education for school children
- Restoration of the xeriscape demonstration garden
- Revision of water rates
- Working with the state correctional facility and other state facilities to reduce water use
- Establishment of a regular leak detection survey schedule
- Revision of water efficiency requirements for new developments

3.0 Water Conservation Actions: 2010-2015

Since 2010, the Village has taken the following implementation actions:

Water Rates – Los Lunas adopted a water rate increase late in 2014, which became effective in January, 2015. The base rate will increase by eight percent per year for each of five years through January 2019, while the volume rate will increase from \$3.25 per 1,000 gallons to \$4.25 per 1,000 gallons for usage over 2,000 gallons. Appendix E is a copy of Village Ordinance 398, which mandates the new water rates both now and in the future.

Data Collection and Management – The Village is very committed to developing and maintaining a water use database and filing annual reports with the OSE that details diversions, metered use and per capita use by customer class. However, during the past year, Los Lunas has encountered numerous problems with its water metering and water use and billing software, resulting in water metering and water use data that needed adjustment before the Village could prepare a GPCD Calculator and AWWA Audit for 2014. In addition, the Village had three recent staff vacancies in its billing and IT departments, which has also affected its ability to resolve the data collection and management problems in a timely manner.

The Village has recently hired employees to fill the two billing department positions. It has also enlisted the assistance of both the metering and billing software vendors, as well as its water resources consultant, in an effort to resolve the data collection and management problems. Appendices B and C are the 2014 GPCD Calculator and 2014 AWWA Audit. These documents were prepared by the Village's water rights consultant, Lee Wilson and Associates (LWA). Although LWA needed to estimate water use for a number of categories of water use, particularly from June-December, 2014, we believe these documents provide an accurate calculation of diversions and a relatively accurate calculation of metered use.

Los Lunas has now assigned a staff member to work with LWA to develop a metered use database, which will be developed and maintained on a monthly basis. This will allow the Village to create and file with the OSE a 2015 GPCD Calculator and AWWA Audit early in 2016.

Xeriscape Demonstration Garden - The Los Lunas staff has completed the restoration of the xeriscape demonstration garden at the Village Hall. The garden had been significantly destroyed by construction at the Village Hall site. New garden plantings have been installed and xeric plant signage has been added. The garden now provides a pleasing display of water-efficient plants.

Leak Detection – The Village is currently obtaining an estimate from a leak detection firm to conduct a leak detection survey.

Higher-Than-Usual Water Use – When the water utility staff identifies unusually high water usage, they notify the customer. More often, the customer calls the water utility when they receive a higher-than-normal water bill. The Village plans to install an

automatic phone dialing system for various customer notifications, which would include notices for higher-than-normal water use.

State Correctional Facility – The state correctional facility, the largest state facility in the area, has recently retrofitted its bathrooms with low-flow toilets. The Village staff will track water usage records to see what reductions occur from this action.

New Development Requirements - The water utility and community development staffs have discussed revising the Village development manual to include more water efficiency requirements. Although some landscape efficiency requirements are already included in the manual, there is no adequate enforcement of the requirements. Further review of current and new requirements is needed.

4.0 2014 GPCD Calculator and Water Audit Results

As described above, because of personnel shortages, staff turnover and conversion to new billing software, it was difficult to obtain and analyze 2014 water use data. However, using reliable data from January to May and making assumptions about data in the second half of 2014, Los Lunas has prepared a 2014 GPCD Calculator and an AWWA Audit to provide basic information about the water system. Appendix B contains the 2014 GPCD Calculator. Appendix C is a description of the methodology used to make adjustments to the data. Appendix D is the 2014 AWWA Water Audit.

These documents indicate that overall per capita demand has decreased from 140 GPCD in 2010 to a little less than 134 gallons per capita per day (GPCD) in 2014. Single Family Residential (SFR) use is 67 GPCD and non-revenue water is a little less than 10 percent of diversions. Since this information will be updated with more accurate 2015 information, we have not provided an extensive analysis at this time. However, overall, this information indicates that the water system is well run, that per capita use continues to decrease slowly over time and that there are not excessive system losses.

5.0 2016-2021 Water Conservation Goals, Priorities and Measures

The following sections describe Los Lunas' current goals and priorities and describe the Village's planned conservation activities by two-year periods for the next five years.

5.1 Conservation Goals and Priorities

Los Lunas has identified two water conservation goals:

- Goal #1: To improve the operational efficiency of its water infrastructure system to more accurately track water use and reduce water losses.
- Goal #2: To reduce higher-than-normal water use in the residential, commercial, institutional and industrial sectors.

Because of the software problems the Village has experienced in maintaining accurate water use and billing data, which affect its ability to identify related water losses and make infrastructure improvements in a timely manner, the Village has identified Goal #1 as its top priority.

5.2 Conservation Measures

Following is a list of water conservation measures that were scheduled for implementation between 2010 and 2015, but were not accomplished, or only partially accomplished, because of the data and staffing issues identified above. Two new measures have been added: one for an evaluation of wastewater reuse potential and a second to emphasize the continuing effort to improve irrigation efficiency in Village facilities. A new time schedule for implementation has also been created.

The following water conservation measures are scheduled for implementation in 2016/2017.

1. Revise current ordinances regarding water waste, water shortages and landscaping to avoid duplication and make other changes as needed to update and strengthen the ordinances.
2. Continue the correction of existing computer-based data collection and management problems to improve the accuracy of water accounting information.
3. Study the feasibility of implementing a toilet rebate program, or similar incentive, for water users with 3.5 gallon or higher per flush toilets.
4. Develop further procedures to notify commercial, industrial and institutional water users of higher-than-normal usage.
5. Begin to work with school board members and other school officials to encourage the inclusion of water conservation curriculum in classrooms.
6. Continue irrigation efficiency improvements in Village facilities, such as parks, the sports complex and schools.

These water conservation measures are planned for implementation in 2018/2019.

1. Work with the state correctional facility and other state facilities to encourage the reduction of water use at their locations.
2. Resume a regular schedule of leak detection surveys as directed by the survey evaluation results.
3. Evaluate implementation of water use tracking tool on the Village website and publicize its availability and purpose. This tool is associated with the remote radio read meter system. A metered user will be able to access his account's water use records to monitor recent and ongoing use, as well as compare this year's use to a comparable period in the previous year. The Village will need a good amount of lead time to

implement this measure, since it will require significant IT time to set up the system and additional funds to provide the service.

4. Offer water use surveys, or other educational services or incentives, to those commercial, industrial and institutional water users whose usage is determined to be above normal.
5. Implement a toilet rebate program, or other incentive, for water users with 3.5 gallon or higher flush toilets, based upon results of the feasibility study.

These water conservation measures are scheduled for implementation in 2020/2021.

1. Revise current requirements for new developments to include slope standards to prevent runoff, maintenance requirements for commercial landscapes, and other requirements such as highly efficient plumbing fixtures and appliances.
2. Study the feasibility of using treated wastewater for construction or other purposes as determined to be cost effective.

6.0 Future Planning Steps

Los Lunas plans to apply for U.S. Bureau of Reclamation grant funds for the creation of a new water conservation plan. The new document would review the planned conservation measures and make revisions as called for by any new water use data findings. The document would meet the requirements of OSE's Technical Report #53. If the BOR grant application is successful, the grant funds should be available late in 2016; and a new plan should be completed in 2017.

Appendix A. 2008 Water Conservation Update

LOS LUNAS WATER CONSERVATION PLAN UPDATE SEPTEMBER 26, 2008

The Village of Los Lunas has filed with the New Mexico State Engineer Office its Water Conservation Plan. The Mid-Region Council of Governments prepared this plan through a grant from the New Mexico Office of Natural Resources Trustee. The plan was completed in January 2006 and contains a list of general findings on water conservation, infrastructure and management. The Plan also contained a list of nine recommended actions:

- implementation of a water shortage plan
- administration of an ongoing leak detection and analysis program
- expansion of water meter inspections; and repair and replacement of old or defective meters
- replacement of older or high-flow plumbing fixtures in public buildings
- initiation of a water rate structure with excess surcharges for high water users
- adoption of a water waste ordinance
- implementation of local building codes requiring low water use plumbing fixtures and appliances
- review and update of local regulations for water conserving landscapes
- expanded efforts on public education programs that promote conservation

Since that time, the Village has taken a number of actions to enhance its already excellent water management plan. They are described below.

1. The Village adopted an emergency water shortage ordinance in January, 2006: Municipal Code 13.20. (Attachment A)
2. The Village adopted a water waste ordinance in April 2007: Municipal Code 8.24: (Attachment B)
3. The Village contracted with a private firm to conduct a leak detection survey in the fall of 2006. The survey detected no leaks. The Village will conduct another survey this fall.
4. During the past 18 months, the Village has replaced all existing residential and commercial meters with wireless radio read meters. The Village is the first community in the state to install this technology. This is a state-of-the-art metering program that allows the staff to record use and generate bills without the meters having to be read on-site. In addition, possible leaks will be detected and addressed very quickly. Within a few months, readings will be accessible through the Village website, so that not only the Village staff, but consumers will be able to monitor their water use on a continuous basis. This program allows the Village to have more accurate

readings and billings and allows better monitoring of water use and identification of water waste

5. The Village changed its landscaping ordinance to require commercial users to reduce lawn size and follow certain planting directives. (Attachment C; see particularly Sec. E.)
6. The Village sends out a monthly newsletter with water bills. This newsletter contains water conservation information. There is an increased emphasis on this information during the summer months. Attachment D is a copy of the April, 2008 newsletter. These newsletters are also posted on the Village website.
7. The following Village buildings have been constructed and/or remodeled and water saving plumbing fixtures have been installed.

Village Administration building addition;
Fire Station renovation;
Heritage and Arts Museum (formerly City Hall); and
Transportation Center (LEED certified green building).

8. All new residential and commercial construction has included water conserving plumbing fixtures. This includes the construction of almost 1300 housing units, as well as a number of commercial establishments.


In addition to these new initiatives, the Village has continued to administer existing programs, such as enforcement of extremely high water and wastewater system construction standards, lower water rights transfer requirements for water conserving subdivisions and ongoing monitoring and management of water infrastructure to minimize system loss. As a result of all the actions described above, per capita demand for water has decreased from 162 gallons per capita per day (gpcd) in 2003 to an estimated 135 gpcd in 2007.

There have been some problems with the server for the new metering system. As a result it was not possible to track 2007 metered use accurately. This software problem has now been resolved. Attachment E is a table of diversions and metered water use for the first half of 2008. Non-revenue water is approximately 5.7 percent of diversions. This compares to the AWWA standard of 10 percent.

Summary. The Village of Los Lunas has always had a very efficient water management system, as described in the 2006 Water Conservation Plan. Since the Plan has been adopted, the Village has passed and enforces three new ordinances that promote conservation, installed a first state-of-the-art metering system and ensured that all new construction has water conserving plumbing

fixtures. Per capita use has decreased to an estimated 135 gpcd and non-revenue is 5.7 percent of diversions.

Appendix B. 2014 GPCD Calculator



NMOSE GPCD CALCULATOR

Gallons per Capita - v2.05

Release Date: August 2015

This spreadsheet-based GPCD calculator is designed to help quantify and track water uses associated with water distribution systems. The spreadsheet contains several separate worksheets. Sheets can be accessed using the tabs towards the bottom of the screen, or by clicking the buttons on the left below. Descriptions of each sheet are also given below.

It should be noted that all the recorded data should be from actual metered results and should not include any estimates.

Value to be entered by user

Dropdown box, pick from list

Value calculated based on input data

No longer available for input

[THE FOLLOWING KEY APPLIES THROUGHOUT:](#)

Look for the following boxes that provide additional [Instructions](#) [Info](#)

Please begin by providing the following information, then proceed through each sheet:

NAME OF CITY OR UTILITY:

REPORTING YEARS: Enter the most recent reporting year: Data can be entered back to:

NAME OF CONTACT PERSON: E-MAIL: TELEPHONE: Ext.

SELECT THE REPORTING UNITS FOR VOLUME DATA: For unit converter click here:

Instructions & Utility

Census Data

Single-Family

Multi-Family

ICI & Other Metered

Reuse

Total Diverted

Reported Data

Annual Performance

Monthly Performance

Definitions

This sheet

Census data and the portal to get the data from the Census website

Single-Family residential gallons and population

Multi-Family residential gallons and population

Other data including Commercial, Industrial and Institutional [1.3] and Other metered [1.4] categories

Data related to water reuse projects

Total Production and Diverted Water

The calculated data graphical review of most common performance indicators

The calculated data graphical review of **annual** performance indicators

The calculated data graphical review of **monthly** performance indicators

Use this sheet to understand terms used in the audit process

All parties reserve the right to validate the data recorded in this document. This does not bind the OSE or the Utility to the results. It is a tool used for planning purposes.

Questions or comments regarding the software please contact us at: waternm@state.nm.us

Census Information Data Table 2.1

Info

[Click here to
access the Census
Web site](#)

OR

[Click here for
instructions on how to
find the data on the
Census website](#)

2019 TO 2014

Use the most recent census data

[Return to Instructions](#)

DATA

US Census Table	Description		INPUT
DP-1	Profile of General Population and Housing Characteristics	Census Year	14835
Subject			
Relationship	In group quarters	Total	147
Housing Occupancy	Total housing units	Total	5,916
	Occupied housing units		5,463
	Vacant housing units		453
Households by Type	Average household size	Total	2.69

Formula: Household Size = Total Population / Total Number of Housing Units

Vacancy Rate % 7.7%

COMMENTS:

DATA INPUT SHEET

Los Lunas

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3. SINGLE-FAMILY RESIDENTIAL (SFR)

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Instructions

MONTHLY DATA

TABLE 3.1 Info

SFR BILLED WATER CONSUMPTION (Gallons (US))

Year	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2019												
2018												
2017												
2016												
2015												
2014	23,602,600	20,701,000	25,696,000	33,760,000	38,098,000	38,098,000	53,212,000	37,756,000	31,841,000	31,912,000	22,837,000	22,624,000
2013												

TABLE 3.2 Info

Total Connections

You have chosen to enter Total Connections, enter the monthly values below,
or enter annual values in table 3.8. Check message above Table 3.3 to see if additional data is required.

Year	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2019												
2018												
2017												
2016												
2015												
2014	5,629	4,587	5,662	5,648	5,640	5,640	5,640	5,707	5,707	5,707	5,707	5,707
2013												

TABLE 3.3 Info

You have entered Total Connections in Table 3.2; enter the number of inactive (zero use) connections below
If values are not entered, an adjustment will be made based on vacancy rates reported in the Census data

Year	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2019												
2018												
2017												
2016												
2015												
2014												
2013												

TABLE 3.4

Formula = (No. of Connections - No. of Zero Use Accounts) * Ave. Household Size

Year	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2019	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
2018	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
2017	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
2016	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
2015	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
2014	13,992	11,189	14,081	14,043	14,022	14,022	14,022	14,202	14,202	14,202	14,202	14,202
2013	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data

TABLE 3.5

Formula = Billed Water Consumption (SFR only) / Calculated Population (SFR only)

Year	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2019	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
2018	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
2017	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
2016	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
2015	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
2014	54.41	66.07	58.87	80.13	87.65	90.57	122.42	85.76	74.73	72.48	53.60	51.39
2013	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data

COMMENTS:

ANNUAL DATA

TABLE 3.6

ANNUAL CONSUMPTION

TABLE 3.7

ANNUAL CALCULATION
N/A
N/A
N/A
N/A
N/A
380,137,600
N/A

TABLE 3.8

AVG. ANNUAL CONNECTIONS

TABLE 3.9

AVG CONN. CALCULATION
N/A
N/A
N/A
N/A
N/A
5,582
N/A

TABLE 3.10 Info

CALCULATED GROWTH RATE
N/A
N/A
N/A
N/A
N/A
N/A
N/A

TABLE 3.11

No. VACANT SFR CONNECTIONS
N/A
N/A
N/A
N/A
N/A
N/A
427
N/A

Are you sure growth is zero?

TABLE 3.12 Info

SIZE OF HOUSEHOLD
2.69
2.69
2.69
2.69
2.69
2.69
2.69
2.69

TABLE 3.13 Info

SFR POPULATION
N/A
N/A
N/A
N/A
N/A
N/A
13,865
N/A

TABLE 3.14 Info

ANNUAL SFR GPCD
N/A
N/A
N/A
N/A
N/A
75.11
N/A

DATA INPUT SHEET

Los Lunas

4. MULTI-FAMILY RESIDENTIAL (MFR)

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[Instructions](#)

MONTHLY DATA

2019

TO

2014

TABLE 4.1 [Info](#)

MFR BILLED WATER CONSUMPTION (Monthly) (Gallons (US))

Year	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2019												
2018												
2017												
2016												
2015												
2014	2,073,000	1,967,000	1,639,000	2,294,000	2,311,000	2,311,000	3,266,000	2,954,000	2,468,000	2,000,000	2,000,000	2,000,000
2013												

TABLE 4.2

If only Current Number of Units is Known, put this number in Table 4.7

NUMBER OF MFR UNITS (Monthly)

Year	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2019												
2018												
2017												
2016												
2015												
2014	598	598	598	598	598	598	598	598	598	598	598	598
2013												

TABLE 4.3

Formula = (Number of Units - Vacant MFR Connections) * Ave. Household Size

MFR POPULATION (Monthly)

Year	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2019	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
2018	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
2017	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
2016	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
2015	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
2014	1,485	1,485	1,485	1,485	1,485	1,485	1,485	1,485	1,485	1,485	1,485	1,485
2013	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data

TABLE 4.4

Formula = MFR Billed Water Consumption (Monthly) / MFR Population (Monthly)

MFR GPCD CALCULATION (Monthly)

Year	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2019	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
2018	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
2017	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
2016	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
2015	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
2014	45.02	47.29	35.59	51.48	50.19	51.86	70.92	64.15	55.38	43.43	44.88	43.43
2013	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data

ANNUAL DATA

TABLE 4.5

ANNUAL CONSUMPTION
N/A
N/A
N/A
N/A
N/A
27,283,000
N/A

TABLE 4.6

ANNUAL CALCULATION
N/A
N/A
N/A
N/A
N/A
27,283,000
N/A

TABLE 4.7

No. CURRENT UNITS

TABLE 4.8

ANNUAL UNIT CALCULATION
N/A
N/A
N/A
N/A
N/A
598
N/A

TABLE 4.9 [Info](#)

MFR POPULATION
N/A
N/A
N/A
N/A
N/A
1,485
N/A

TABLE 4.10

VACANT MFR CONNECTIONS
N/A
N/A
N/A
N/A
N/A
46
N/A

TABLE 4.11 [Info](#)

ANNUAL MFR GPCD
N/A
N/A
N/A
N/A
N/A
50.32
N/A

DATA INPUT SHEET

Info

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2019

TO

2014

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5. INDUSTRIAL, COMMERCIAL & INSTITUTIONAL (ICI) AND OTHER METERED

MONTHLY DATA

TABLE 5.1

ICI WATER CONSUMPTION (Gallons (US))

Year	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2019												
2018												
2017												
2016												
2015												
2014	12,772,000	11,235,000	18,092,000	22,905,000	28,301,000	28,301,000	39,477,000	32,427,000	29,211,000	25,572,000	16,023,000	12,219,000
2013												

TABLE 5.2

OTHER METERED (Gallons (US))

Year	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2019												
2018												
2017												
2016												
2015												
2014	301,000	1,115,000	1,115,000	1,055,000	605,000	1,371,000	1,051,000	1,820,000	3,300,000	1,382,000	1,382,000	1,682,000
2013												

COMMENTS:

ANNUAL DATA		
TABLE 5.3	TABLE 5.4	TABLE 5.5
ICI ANNUAL CONSUMPTION	ICI GPCD	ICI ANNUAL CALCULATED
	N/A	N/A
	N/A	N/A
	N/A	N/A
	N/A	N/A
	N/A	N/A
	48.89	276,535,000
	N/A	N/A
TABLE 5.6	TABLE 5.7	TABLE 5.8
OTHER ANNUAL CONSUMPTION	OTHER METERED GPCD	OTHER ANNUAL CALCULATED
	N/A	N/A
	N/A	N/A
	N/A	N/A
	N/A	N/A
	N/A	N/A
	2.86	16,179,000
	N/A	N/A

DATA INPUT SHEET

Info

6. REUSE

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MONTHLY DATA

2019 TO 2014

TABLE 6.1
REUSE DIVERSIONS (Monthly) (Gallons (US))

Year	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2019												
2018												
2017												
2016												
2015												
2014												
2013												

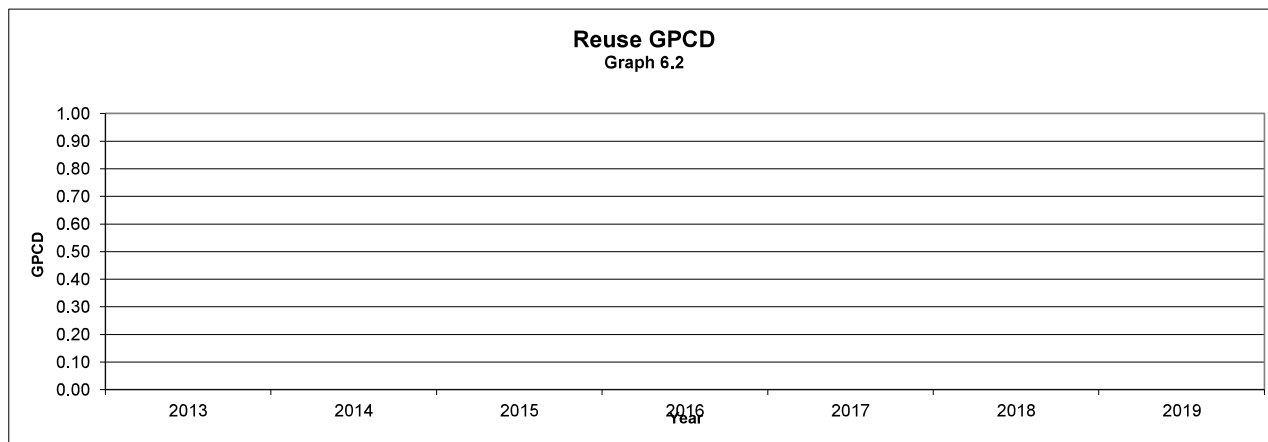
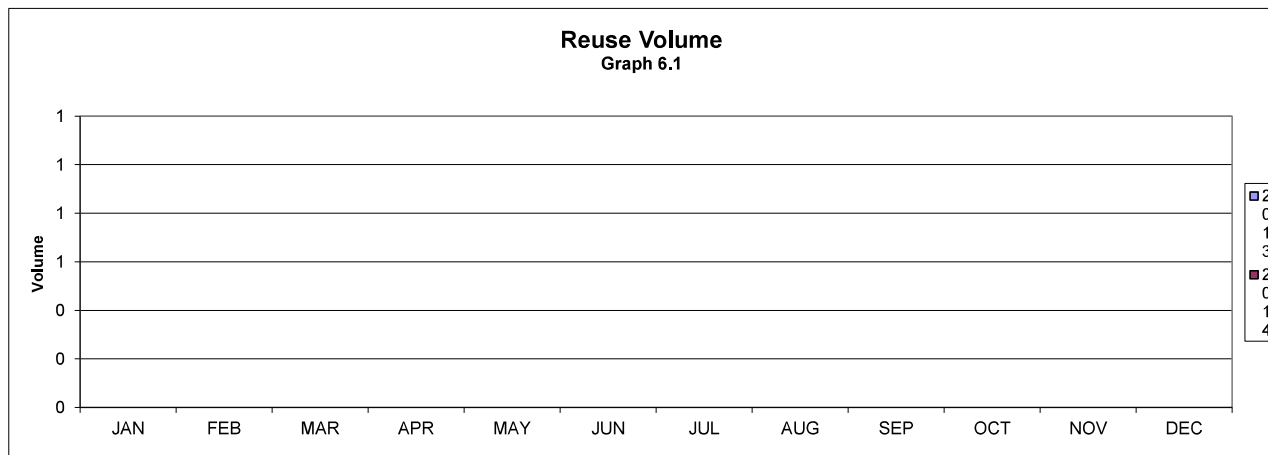
COMMENTS:

ANNUAL DATA

TABLE 6.2
REUSE ANNUAL DIVERSIONS

TABLE 6.3
REUSE GPCD

	N/A
	N/A
	N/A
	N/A
	N/A
	N/A
	N/A



DATA INPUT SHEET

Los Lunas

7. TOTAL WATER DIVERTED AND SUPPLIED

Return to
Instructions

MONTHLY DATA

TABLE 7.1

TOTAL WATER DIVERTED (Monthly) (Gallons (US))

2019

TO

2014

Year	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2019												
2018												
2017												
2016												
2015												
2014	43,415,000	40,520,000	57,755,000	68,364,000	79,842,000	90,253,000	79,324,000	77,698,000	70,178,000	60,079,000	45,641,000	44,123,000
2013												

TABLE 7.2

IMPORTED WATER (Monthly)(Gallons (US))

Info

Year	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2019												
2018												
2017												
2016												
2015												
2014												
2013												

TABLE 7.3

EXPORTED WATER (Monthly) (Gallons (US))

Info

Year	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2019												
2018												
2017												
2016												
2015												
2014												
2013												

TABLE 7.4

TOTAL WATER SUPPLY (Monthly) (Gallons (US))

Formula = Total Water Diverted + Imported water - Exported Water

Year	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2019	0	0	0	0	0	0	0	0	0	0	0	0
2018	0	0	0	0	0	0	0	0	0	0	0	0
2017	0	0	0	0	0	0	0	0	0	0	0	0
2016	0	0	0	0	0	0	0	0	0	0	0	0
2015	0	0	0	0	0	0	0	0	0	0	0	0
2014	43,415,000	40,520,000	57,755,000	68,364,000	79,842,000	90,253,000	79,324,000	77,698,000	70,178,000	60,079,000	45,641,000	44,123,000
2013	0	0	0	0	0	0	0	0	0	0	0	0

Table 7.5

SYSTEM TOTAL GPCD (Monthly)

Year	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2019	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
2018	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
2017	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
2016	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
2015	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
2014	90	93	120	147	166	194	165	162	151	125	98	92
2013	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data

COMMENTS:

ANNUAL DATA

TABLE 7.6

ANNUAL TOTAL
DIVERTED

TABLE 7.7

ANNUAL TOTAL
DIVERTED CALC

N/A
N/A
N/A
N/A
N/A
757,192,000
N/A

TABLE 7.8

ANNUAL TOTAL
IMPORTED

TABLE 7.9

ANNUAL TOTAL
IMPORT CALC

N/A
N/A
N/A
N/A
N/A
N/A
N/A

TABLE 7.10

ANNUAL TOTAL
EXPORTED

TABLE 7.11

ANNUAL TOTAL
EXPORT CALC

N/A
N/A
N/A
N/A
N/A
N/A
N/A

TABLE 7.12

ANNUAL TOTAL
WATER SUPPLY

0
0
0
0
0
0
757,192,000
0

TABLE 7.13

TOTAL POP.
EST.

N/A
N/A
N/A
N/A
N/A
N/A
15,498
N/A

TABLE 7.14

Year SYSTEM TOTAL
GPCD

2019	NA
2018	NA
2017	NA
2016	NA
2015	NA
2014	133.86
2013	NA

8. SUMMARY GPCD REPORTED DATA

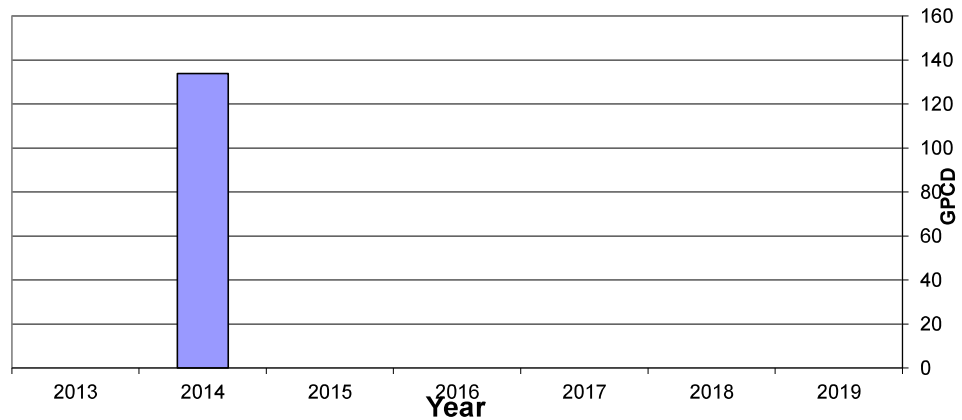
Los Lunas

ANNUAL

2019 To: 2014

Year	SYSTEM GPCD
2019	NA
2018	NA
2017	NA
2016	NA
2015	NA
2014	133.86
2013	NA

ANNUAL - SYSTEM TOTAL GPCD



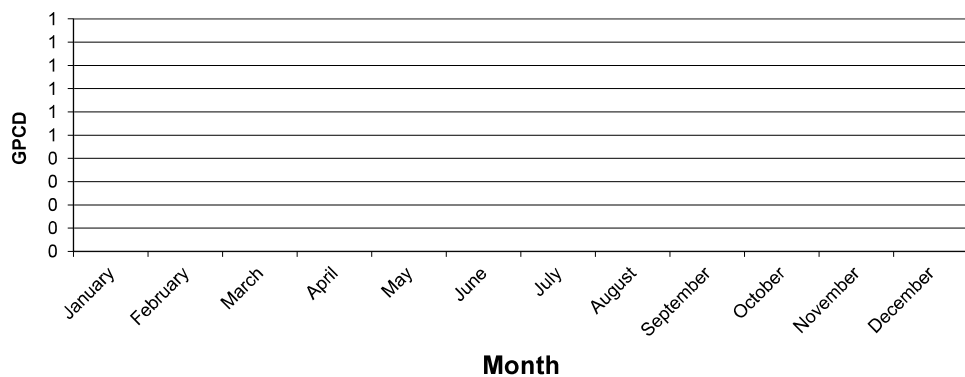
MONTHLY

Month	SFR GPCD
January	#N/A
February	#N/A
March	#N/A
April	#N/A
May	#N/A
June	#N/A
July	#N/A
August	#N/A
September	#N/A
October	#N/A
November	#N/A
December	#N/A

Year 0

Peak/Ave #N/A

Monthly - Single-Family Residential GPCD
Sector Specific Population

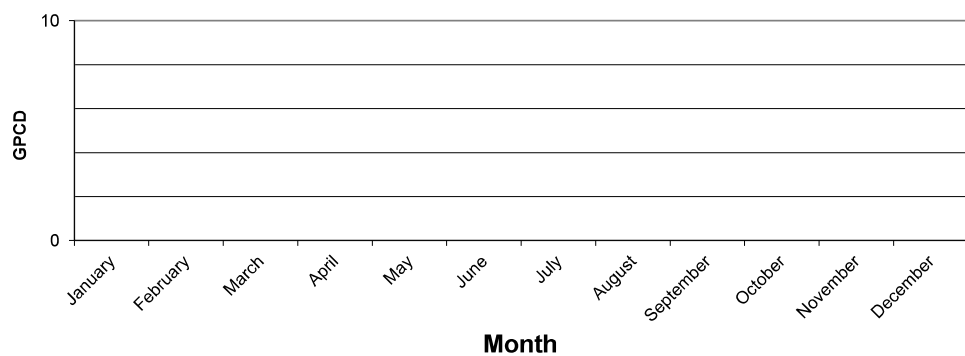


YEAR 0

Month	MFR GPCD
January	#N/A
February	#N/A
March	#N/A
April	#N/A
May	#N/A
June	#N/A
July	#N/A
August	#N/A
September	#N/A
October	#N/A
November	#N/A
December	#N/A

Peak/Ave #N/A

Monthly - Multi-Family Residential GPCD
Sector Specific Population



YEAR 0

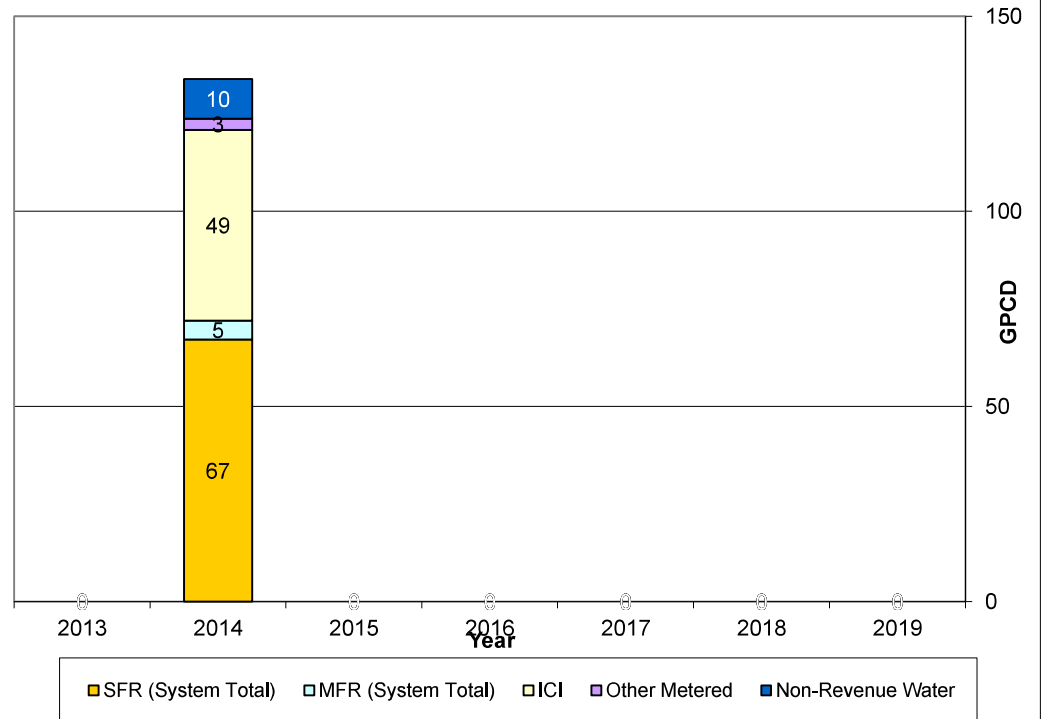
9. System Total Annual Reporting Performance

Overall Annual GPCD (based on Total Population)

					Info		
	SFR (System Total)	MFR (System Total)	ICI	Other Metered	Non-Revenue Water	Total Supplied	Non-Revenue Volume Million Gallons (US)
Year							
On Graph?	Yes	Yes	Yes	Yes	Yes		
2019	N/A	N/A	N/A	N/A	#####	#VALUE!	-
2018	N/A	N/A	N/A	N/A	#####	#VALUE!	-
2017	N/A	N/A	N/A	N/A	#####	#VALUE!	-
2016	N/A	N/A	N/A	N/A	#####	#VALUE!	-
2015	N/A	N/A	N/A	N/A	#####	#VALUE!	-
2014	67.20	4.82	48.89	2.86	10.09	133.86	57.06
2013	N/A	N/A	N/A	N/A	#####	#VALUE!	-

Los Lunas		
2019 to 2014		

Annual Analysis of GPCD - Viewer
(based on Total Population)



10. Monthly Reporting Performance

Choose Year for Monthly Analysis

Choose Sector

Single-Family Residential

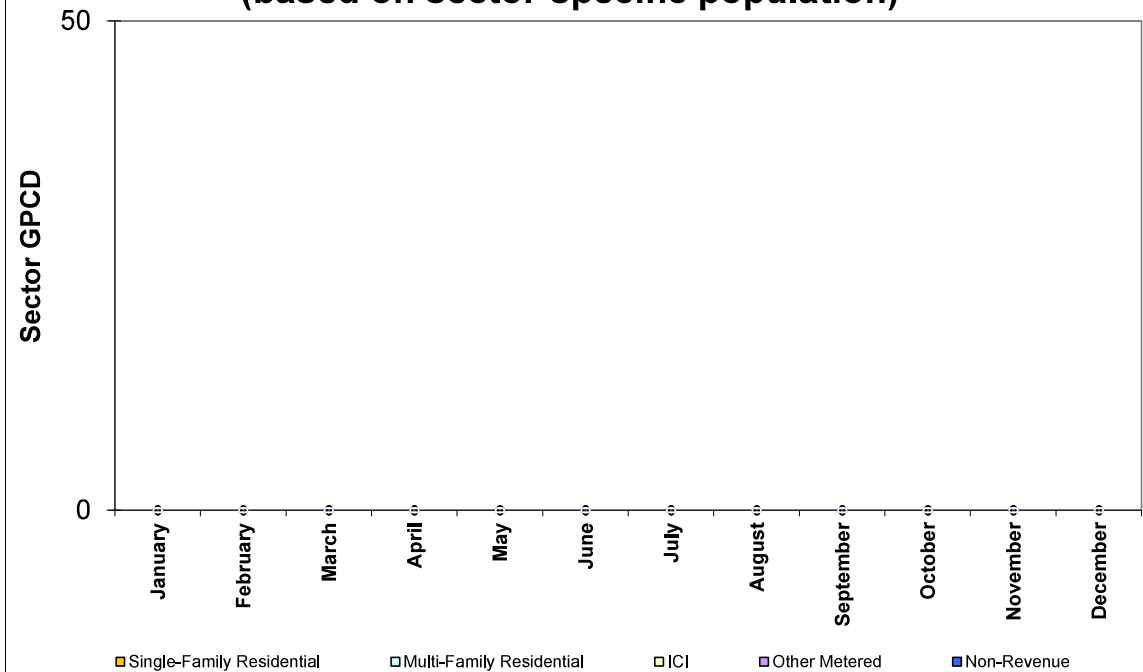
Monthly GPCD

	Single-Family Residential	Multi-Family Residential	ICI	Other Metered	Non-Revenue
Month	GPCD	GPCD	GPCD	GPCD	GPCD
JAN	#N/A	#N/A	#N/A	#N/A	#N/A
FEB	#N/A	#N/A	#N/A	#N/A	#N/A
MAR	#N/A	#N/A	#N/A	#N/A	#N/A
APR	#N/A	#N/A	#N/A	#N/A	#N/A
MAY	#N/A	#N/A	#N/A	#N/A	#N/A
JUN	#N/A	#N/A	#N/A	#N/A	#N/A
JUL	#N/A	#N/A	#N/A	#N/A	#N/A
AUG	#N/A	#N/A	#N/A	#N/A	#N/A
SEP	#N/A	#N/A	#N/A	#N/A	#N/A
OCT	#N/A	#N/A	#N/A	#N/A	#N/A
NOV	#N/A	#N/A	#N/A	#N/A	#N/A
DEC	#N/A	#N/A	#N/A	#N/A	#N/A

Los Lunas

2019 to 2014

Monthly Analysis of GPCD - Viewer (based on sector-specific population)



NMOSE GPCD Software: Definitions

GPCD v2.0 ©

[Back to Instructions](#)

Item Name		Description					
Active Connections		All active Single Family Residential connections within the utility. Connections that are not occupied or show zero activity are not counted in this category.					
Annual Multi-Family Residential GPCD Calculation	Find	The MFR GPCD is Annual MF Calculation (4.6) divided by the annual MFR Population (4.9).					
Annual Single Family Residential GPCD Calculation	Find	The SFR GPCD is Annual SFR Calculation (3.7) divided by the annual SFR Population average (3.13).					
Billed Water Consumption (Multi-Family Residential)	Find	This is the total billed consumption for Multi-Family residential uses only. Provide the amount of water used (gallons) for multi-family residential connections by month in Table 4.1, or by year in Table 4.5. If multi-family residential is not available as a separate category, provide an explanation in the Comments Box and include usage in the Industrial, Commercial and Institutional Table 5.1 or Other Metered Table 5.2 on Sheet 5.					
Billed Water Consumption (Single-Family Residential)	Find	This is the total billed consumption for Single-Family residential uses only.					
Calculated Growth Rate	Find	The calculated growth rate is a calculation developed to normalize the data to the growth in the utility. The growth is determined by evaluating the percentage change in the number of connections within the utility on an annual basis, provided in Table 3.9 Average Connections Calculated. If there are no more than one years' data, then this will not be calculated. This Table is for the utilities use in checking the growth percentage calculated against their own estimates. It is also used in Table 4.8 Number of (Multi-Family) Units if only the current number of multi-family units can be provided.					
Census Data	Find	The Census data is used to standardize the calculation of population by utilizing numbers of people per household. It also records information on the vacancy rate within each city which enables calculation of the number of households actually being used. There is a link to a pdf document in Definitions showing the user how to find and record the relevant data.					
Converter	Find	<div>The user may develop a GPCD Analysis based on one of two input unit selections: 1) Gallons (US) 2) Cubic feet Please select the units from the instructions worksheet. An interactive unit converter is also provided below. Input volume in first box below and select units to be converted.</div> <table><tr><td>1</td><td>Gallons (US)</td><td>=</td><td>0.134</td><td>Cubic Feet</td></tr></table>	1	Gallons (US)	=	0.134	Cubic Feet
1	Gallons (US)	=	0.134	Cubic Feet			
Exported Water	Find	Enter all water exported from the system. This will include any pass-through arrangements or wholesale contracts to other drinking water suppliers, where the reporting utility is the water rights permit holder.					
GPCD	Find	Gallons per capita per day (GPCD) is a method utilized internationally to measure water use by drinking water suppliers. It is most commonly used to describe historical and current water uses, providing a baseline of water use that is not as susceptible to changes in population. GPCD is also used for planning purposes, allowing estimates of future demand requirements based on localized population projections. More sophisticated planning efforts utilize GPCD to determine conservation potential, track the results of program implementation, and calculate projections based on conservation adjusted GPCD.					
General Information		The white boxes are data entry cells and are used for inputting data. All other cells except dropdown menus (purple boxes) are protected for the user's benefit to stop any overwriting of formulas and calculated cells. The green boxes are values that have been calculated based on inputs.					
Graphing Results	Find	Datasets will automatically be graphed when using the graphing data tools in both the Annual and Monthly Performance worksheets. For example, choosing the year and the use sector from the purple dropdown boxes will allow these variables to be graphed.					
Imported Water	Find	Enter all water imported from other systems. This will include any retail contracts with other drinking water suppliers where this utility purchases water from another utility and is not the permit holder.					
Inactive and Zero Connections	Find	The inactive and zero connections are recorded in Table 3.3 so that unused single family residential connections will be removed from the calculation of single family population when Total Units is chosen from the drop down list in Table 3.2.					

Industrial, Commercial and Institutional (ICI)	Find	Includes industrial properties, such as manufacturing, commercial properties such as restaurants, shopping malls, and institutional customers such as schools, universities and prisons.
Multi-Family Residential Connections	Find	A multifamily unit is living units in an apartment complex, duplexes, triplexes, trailer parks, and condo or town houses that have multiple units serviced by a single connection. They are not counted in the single-family residential category.
Multi-Family Residential Population	Find	Multi-family population is calculated from number of MFR units in the Annual Unit Calculation (4.8) minus Vacant MFR Connections (4.10). That number is then multiplied by Average Size of Occupied Housing Units from the US Census (2.1).
Non-Revenue Water		Non-revenue water is all the water the utility diverts and/or produces, but does not get paid for. Non-revenue water includes apparent losses such as meter inaccuracies, theft, and database errors, real losses such as leaks. It also includes unbilled authorized uses such as fire-fighting, line flushing and disinfection. The Calculator does not provide data entry for unmetered billed water. This might include bulk sales or monthly fees not based on usage. The non-revenue water in the Calculator includes all water that is not metered.
Other Metered	Find	All categories of billed metered use that is not otherwise classified in SFR, MFR or ICI. This provides the user the opportunity to track alternative categories. Examples included irrigation only, stand pipes, and fire hydrant/construction meters. Everything not included in SFR, MFR, ICI or Other will end up in non-revenue water.
Reuse	Find	Reuse, or Recycled water is former wastewater (sewage) that has been treated to remove solids and certain impurities and reused by a water supplier. In most locations, it is only intended to be used for nonpotable uses, such as irrigation, and dust control. This data is not included in any other calculation. It is provided as a tracking tool for the user.
Single Family Residential Connections	Find	SFR Connection is a stand alone or independently metered housing unit. The number used in the Calculator can be Total Connections or Active Connections only.
Single Family Residential Population	Find	Single Family Population (3.13) is calculated from number of active connections times size of average household (3.12). It can be calculated monthly or annually depending on the data provided. If Total Connections is chosen (3.2), then inactive connections are subtracted prior to multiplying by size of average household (3.12). If Active Connections is chosen (3.2), then number of connections are multiplied by size of average household (3.12) without any subtractions.
Size of Average Household	Find	This Table is determined from the US Census data in Table 2.1, Sheet 2. This data is used to determine a total single-family population and total multi-family population for both the monthly and annual data (Tables 3.4 and 3.13, Tables 4.3 and 4.9 respectively).
Total Connections		All active and inactive Single Family Residential connections within the utility.
System Total GPCD	Find	The System Total GPCD is calculated by dividing the quantity of Total Water Diverted (plus imports minus exports) by the System Total Population
Total Population	Find	The Total Population estimate is the sum of the single-family population + multi-family population + group quarters population.
Vacant Single-Family Residential Connections	Find	This is a calculated field using either i) the average of the monthly vacant SFR connections, if monthly data are available or ii) an estimated value based on the Census data vacancy rate multiplied by the number of Total SFR connections. When Total Connections is chosen in Table 3.2, vacant single family residential connections are subtracted from Total Connections prior to calculating a population (based on household size) and a single family GPCD.

How to find the data required for Census section

Appendix C. Summary of Methodology


Methodology for Calculation of 2014 Diversions and Metered Use Data

Lee Wilson and Associates prepared an OSE GPCD Calculator and AWWA Audit for 2014. Although it is our opinion that these documents provide an approximation of metered use by customer class, there were a number of the problems with the data and we needed to make adjustments and assumptions to be able to complete these two documents.

1. Because the Village did not read the backflow meters in March and November, we took the readings from the period between February 1 and April 1 and divided the use for the 2 month period evenly into the two previous months. We used the same approach for the period between October 1 and December 1.
2. In June, there was a computer failure that required the Village to send out June bills which were the same as the May usage bills. The July use represents the difference between the June billed use and the actual use in June and July. In addition, we assumed that each type of use in July was the same percentage of the total diversions as it was in May.
3. In September, the Village began a transition to a new software system and we were unable to obtain metered use data. We have assumed that September metered use for each category of users represented the same percentage of the total diversions calculated for August.
4. In October, the Village completed its transition to a new software system. There were a number of glitches that required adjustments and assumptions. These are described below.
5. From October-December, a number of Multi-Family Residential (MFR) accounts were classified as residential. As a result, the billing data only represented 25 percent of MFR use. For this reason, we assumed that MFR use was 2 MG/month and adjusted the residential use accordingly.
6. In October, the Village read a number of construction meters that had not been read for over a year. We calculated the metered use from these accounts and deducted 90 percent of the billed amount.
7. December billing data contained substantial errors for 3 large accounts. We deleted the consumption from these accounts to calculate metered use.
8. We assumed that the number of residential and MFR residential accounts remained stable from August to December, 2014.

Notwithstanding these issues, we believe that the metered use data is relatively representative of actual use throughout 2014. The Village will be working with its billing software company and water resources consultant to prepare a 2015 Water Use database which will be used to update the GPCD Calculator and AWWA Audit.

Appendix D. 2014 AWWA Water Audit



AWWA Free Water Audit Software:
Reporting Worksheet

WAS v5.0
 American Water Works Association
 Copyright © 2014, All Rights Reserved.

? Click to access definition

+ Click to add a comment

Water Audit Report for: Los Lunas
Reporting Year: 2014 1/2014 - 12/2014

Please enter data in the white cells below. Where available, metered values should be used; if metered values are unavailable please estimate a value. Indicate your confidence in the accuracy of the input data by grading each component (n/a or 1-10) using the drop-down list to the left of the input cell. Hover the mouse over the cell to obtain a description of the grades

All volumes to be entered as: MILLION GALLONS (US) PER YEAR

To select the correct data grading for each input, determine the highest grade where the utility meets or exceeds all criteria for that grade and all grades below it.

WATER SUPPLIED

Volume from own sources:	+ ?	7	757,200.000	MG/Yr
Water imported:	+ ?	n/a		MG/Yr
Water exported:	+ ?	n/a		MG/Yr

WATER SUPPLIED:

757,200.000

MG/Yr

Master Meter and Supply Error Adjustments

Pcnt:	Value:	MG/Yr
+ ?	<input type="radio"/> <input checked="" type="radio"/> <input type="radio"/>	
+ ?	<input type="radio"/> <input checked="" type="radio"/> <input type="radio"/>	
+ ?	<input type="radio"/> <input checked="" type="radio"/> <input type="radio"/>	

Enter negative % or value for under-registration
Enter positive % or value for over-registration

AUTHORIZED CONSUMPTION

Billed metered:	+ ?	8	681,176.000	MG/Yr
Billed unmetered:	+ ?	10		MG/Yr
Unbilled metered:	+ ?	9	16,179.000	MG/Yr
Unbilled unmetered:	+ ?	6	0.500	MG/Yr

AUTHORIZED CONSUMPTION:

697,355.500

MG/Yr

Click here: ? for help using option buttons below

Pcnt: 0 Value: 0.500 MG/Yr

Use buttons to select percentage of water supplied OR value

Pcnt: 0 Value: 0.500 MG/Yr

0 0.500 MG/Yr
0 0.500 MG/Yr

WATER LOSSES (Water Supplied - Authorized Consumption)

59,844.500

MG/Yr

Apparent Losses

Unauthorized consumption:	+ ?	2	0.500	MG/Yr
Customer metering inaccuracies:	+ ?	9	0.500	MG/Yr
Systematic data handling errors:	+ ?	7	0.500	MG/Yr

Apparent Losses:

1.500

MG/Yr

Real Losses (Current Annual Real Losses or CARL)

Real Losses = Water Losses - Apparent Losses:

59,843.000

MG/Yr

WATER LOSSES:

59,844.500

MG/Yr

Pcnt: 0 Value: 0.500 MG/Yr

0 0.500 MG/Yr
0 0.500 MG/Yr

NON-REVENUE WATER

NON-REVENUE WATER:

76,024.000

MG/Yr

= Water Losses + Unbilled Metered + Unbilled Unmetered

Pcnt: 0 Value: 0.500 MG/Yr

0 0.500 MG/Yr
0 0.500 MG/Yr

SYSTEM DATA

Length of mains:	+ ?	8	128.0	miles
Number of <u>active AND inactive</u> service connections:	+ ?	8	6,256	
Service connection density:	?		49	conn./mile main

Are customer meters typically located at the curbside or property line? Yes (length of service line, beyond the property boundary, that is the responsibility of the utility)

Average length of customer service line: ?

Average length of customer service line has been set to zero and a data grading score of 10 has been applied

Average operating pressure: + ? 6 65.0 psi

Pcnt: 0 Value: 0.500 MG/Yr

0 0.500 MG/Yr
0 0.500 MG/Yr

COST DATA

Total annual cost of operating water system:	+ ?	6	\$2,860,920	\$/Year
Customer retail unit cost (applied to Apparent Losses):	+ ?	8	\$3.25	\$/1000 gallons (US)
Variable production cost (applied to Real Losses):	+ ?	6	\$492.61	\$/Million gallons

☒ Use Customer Retail Unit Cost to value real losses

Pcnt: 0 Value: 0.500 MG/Yr

0 0.500 MG/Yr
0 0.500 MG/Yr

*** YOUR SCORE IS: 71 out of 100 ***

A weighted scale for the components of consumption and water loss is included in the calculation of the Water Audit Data Validity Score

PRIORITY AREAS FOR ATTENTION:

Based on the information provided, audit accuracy can be improved by addressing the following components:

1: Volume from own sources

2: Unauthorized consumption

3: Total annual cost of operating water system

AWWA Free Water Audit Software v5.0

Reporting Worksheet 1

Appendix E. Ordinance 398



ORDINANCE 398

- WHEREAS,** The Village of Los Lunas is responsible for and committed to the provision of water and sewer facilities at levels necessary to deliver service to residents of the Village; and
- WHEREAS,** The Village of Los Lunas ensures the Village generates adequate revenue to meet existing water and sewer operational and maintenance costs, increasing costs for water supply treatment, sanitary sewer treatment, water distribution and sanitary sewer collection system maintenance and proactive management for planned water and sewer system capital improvements projects; and
- WHEREAS,** The Governing Body, after careful consideration of the matter, hereby finds and declares that the proposed water and sanitary sewer rate increase is in the best interest of the general welfare of the Village and its residents.

NOW, THEREFORE, BE IT ORDAINED THAT SECTION 13.04.050 (A), (B) AND (C) ARE HEREBY AMENDED AS STATED HEREIN; SECTION 13.04.050 (F)(3) IS HEREBY DELETED AND SECTION 13.12.030 (A)(1),(A)(2), (C)(1) , (C)(2) AND (E) OF THE VILLAGE OF LOS LUNAS MUNICIPAL CODE IS AMENDED TO READ AS:

13.04.050 - Service charges.

- A. The minimum monthly charge for all metered users inside the Village limits shall be eighteen dollars and thirty-seven cents per unit beginning on January 1, 2015. This minimum monthly charge shall be increased annually by eight percent beginning on January 1, 2016, and continuing on the first day of every January for the next three years thereafter ending on December 31, 2019. Each July of every year, the minimum monthly charge contained in this section, in addition to the eight percent annual increase as stated herein, shall be adjusted automatically to reflect the increase in the cost of living as determined by the Consumer Price Index.
- B. The minimum monthly charge will entitle any water user inside the Village limits to two thousand gallons of water per month per unit without additional charge. All water taken through the meter after the volume allowance for the minimum charge shall be billed at the rate of four dollars and twenty-five cents per one thousand gallons of usage or fraction thereof prorated at the rate of forty-two and one-half cents for every one-hundred gallons of usage above the two thousand gallons per month volume allowance.
- C. The minimum monthly charge for water taken through a meter by a user outside the Village limits shall be twenty-seven dollars and three cents per unit beginning on January 1, 2015. This minimum monthly charge shall be increased annually by eight percent beginning on January 1, 2016, and continuing on the first day of every January for the next three years thereafter ending on December 31, 2019. Each July of every year, the minimum monthly charge contained in this section, in addition to the eight percent annual increase as stated herein, shall be adjusted automatically to reflect the increase in the cost of living as determined by the Consumer Price Index. The minimum monthly charge will entitle any water user outside the Village limits to two thousand gallons of water per month per unit without additional charge. All water taken through the meter after the volume allowance for the minimum charge shall be charged at the rate of four dollars and twenty-five

cents per one thousand gallons or fraction thereof prorated at the rate of forty-two and one-half cents for every one-hundred gallons of usage above the two thousand gallons per month volume allowance.

(Ord. 398 (part), 2014; Ord. 332 (part), 2006; Ord. 282 (part), 2001; Ord. 226 (part), 1995; Ord. 192 (part), 1993; Ord. 175, 1991; Ord. 155-1990-1, 1990: Ord. 155-1988 § 5, 1988)

13.12.030 - Sewer rates.

The following sewer user fees shall be assessed monthly for the use of the village sewer services:

- A.
 - 1. Zero to two thousand gallons, a service charge of twenty-three dollars and twenty-two cents, which shall become effective January 1, 2015 for all single-family homes. This fee shall be increased annually by eight percent each year beginning on January 1, 2016, and continuing on the first day of every January for the next three years thereafter ending on December 31, 2019. Each July of every year, the service charge contained in this section, in addition to the eight percent annual increase stated herein, shall be adjusted automatically to reflect the increase in the cost of living as determined by the Consumer Price Index.
 - 2. Two thousand and one gallons and above, a service charge of twenty-three dollars and twenty-two cents plus three dollars and seventy-five cents per one thousand gallons or fraction thereof prorated at the rate of thirty-seven and one-half cents for every one-hundred gallons of usage above two thousand gallons per month volume allowance shall be charged.
- C. All Other Users.
 - 1. Zero to two thousand gallons, a service charge of twenty-three dollars and twenty-two cents, which shall become effective January 1, 2015. This fee shall be increased annually by eight percent each year beginning on January 1, 2016, and continuing on first day of every January for the next three years thereafter ending on December 31, 2019. Each July of every year, the service charge contained in this section, in addition to the eight percent annual increase stated herein, shall be adjusted automatically to reflect the increase in the cost of living as determined by the Consumer Price Index.
 - 2. Two thousand and one gallons and above, a service charge of twenty-three dollars and twenty-two cents plus three dollars and seventy-five cents per one thousand gallons or fraction thereof prorated at the rate of thirty-seven and one-half cents for every one-hundred gallons of usage above two thousand gallons per month volume allowance shall be charged.
- E. Users Outside the Village Limits. All connections outside the Village limits shall pay a service charge of thirty-one dollars and eighty-six cents for zero to two thousand gallons, which shall become effective January 1, 2015. This fee shall be increased annually by eight percent each year beginning on January 1, 2016, and continuing on the first day of every January for the next three years thereafter ending on December 31, 2019. All water taken through the meter after the volume allowance for the service charge shall be billed at the rate of three dollars and seventy-five cents per one thousand gallons or fraction thereof prorated at the rate thirty-seven and one-half cents for every one-hundred gallons of usage above the two thousand gallons per month volume allowance stated in this section. All current metered users outside the Village limits shall be billed the outside Village limits fee in this chapter. Each July of every year, the service charge contained in this section, in addition to the annual eight percent increase stated herein, shall be adjusted automatically to reflect the increase in the cost of living as determined by the Consumer Price Index.

(Ord. 398 (part), 2014; Ord. 332 (part), 2006; Ord. 282 (part), 2001; Ord. 192 (part), 1993; Ord. 176, 1991; Ord. 130 § 5, 1983)